Naturalistic driving
- initiatives in Austria

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Content

• Project “drivEkustik”
• “Site-based observation Vienna”
• “100 car study Austria”
• Future opportunities in ND research
Project drivEkustik

Title: “Driver behaviour in and acoustic perception of e-cars”
Customer: Austrian Road Safety Fund
Coordination: Austrian Road Safety Board (KFV)
Partners
• Test & Training international (TTI)
• Austrian Institute of Technology (AIT)
• Austrian Federation of the Blind and Partially Sighted (ÖBSV)
• Swiss Council for Accident Prevention (bfu)
Project drivEkustik

Problem definition
Increased use of almost soundless e-cars in next years -> effects on road safety?

Why Naturalistic Driving?
Research in risk factors should not wait for a sufficient number of accidents to analyse!

Expected results
Recommendations for ensuring road safety of e-cars and future research
Project drivEkustik

Purpose of project

• Compare driving behaviour between users of e-cars and cars with combustion engine
• Analyse behaviour and potential conflicts of vulnerable road users in interaction with e-cars compared to cars with combustion engine
• Measure audibility of different types of e-cars
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Driver behavior: recording & comparison
Measurement of driver behavior with e-vehicles; analysis of current data from the EU-project „PROLOGUE“

Audio perception
Investigation of e-vehicles

Acoustic measurement
Comparison of indoor acoustics between e-vehicles and vehicles with combustion engine

Interview
Relationship between technical measurements and subjective observation

Surveillance
Analysis of the behavior of vulnerable road users compared to e-vehicles

27.06.2011
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WP 2 - Data collection in e-cars with p-drive-system and additional measuring devices (e.g. cameras, GPS, acceleration indicator, ...)

WP 3 - Comparison of behaviour and mobility data with existing data of EU-projects PROLOGUE & DACOTA

WP 5 - Site-based observation of interaction between e-cars and vulnerable road users in comparison to other cars

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DAS: p-drive-system

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Title: “Video observation of pedestrian crossing in Vienna”
Customer: City of Vienna
Coordination: Austrian Road Safety Board (KFV)
Partners
• Austrian Institute of Technology (AIT)
• SLR Engineering OG
• ABC Consulting
Problem definition
8 year old schoolchild killed on pedestrian crossing

Why site-based observation?
Analyse specific risk factors and find new measures

Expected results
Evaluation of video based systems which automatically detect exposure of persons on pedestrian crossing and enables enforcement
Site-based observation

Purpose of project
• Analysis of driving behaviour before pedestrian crossing (e.g. speed, willingness to stop, …)
• Collection of scenarios for exposure of persons on pedestrian crossing
• Analysis of critical situations and assessment of interactions between drivers and pedestrians to identify dangerous situations for future enforcement

27.06.2011
Site-based observation

DAS: video cameras
Title: “100 car study Austria”
Customer: self-financing
Coordination: Austrian Road Safety Board (KFV)
Partners
Negotiations with system providers and other partners under progress
100 car study

Purpose of data collection

• continuous video data in front and inside the vehicle

• continuous basic driving parameters according to recommendations of EU-project DACOTA
100 car study

Focus of project

• road user behaviour of novice and elderly drivers
• road user behaviour in normal conditions, near miss accidents and crashes
• information about underreported accident causes as distraction, inattention and fatigue
100 car study
Future opportunities in ND research

• Improve driver training
• Increase effectiveness of enforcement
• Analyse effects of fatigue and drowsiness
• Evaluate new road safety measures?
Thank you for your attention!